



**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A computer implemented method of automatically extracting information from Electronic Data Interchange (EDI) documents or messages using an EDI system, to be used in analysis of the EDI documents, comprising:

extracting segments, transaction sets, functional groups, and attributes from an EDI document, as extracted data;

storing the extracted data in a memory in a hierarchical manner according to whether the extracted data is segment data, transaction set data, functional group data, or attribute data[[,]];

~~extracting wherein~~ at least one functional group is extracted from the EDI document ~~from the memory~~ based on a hierarchical relationship between the ~~segment~~ segments extracted from the EDI document and other of the extracted data of the EDI document stored in the memory;

~~extracting wherein~~ at least one transaction set is extracted from the EDI document that is a part of the at least one functional group, based on a linkage in the memory of the at least one transaction set to the at least one functional group; ~~and~~

analyzing the EDI document based on ~~information obtained in the first, second and third extracting steps,~~ the extracted data stored in the memory;

~~wherein assigning an attribute to each of the extracted data stored in the memory is assigned an attribute that is also stored;~~ ~~and~~

storing, in the memory, the assigned attributes and linking the assigned attributes ~~and that is linked~~ to each of the extracted data stored in the memory; ~~and;~~

wherein the at least one functional group and the at least one transaction set extracted from the EDI document are stored in the memory with a common attribute.

2. – 5. (Canceled).

6. (Currently Amended) A system for automatically generating data in a self-describing markup language format from an EDI document, comprising:

a data extractor that is configured to extract segments, transaction sets, functional groups, and attributes from the EDI document, as extracted data; and

a memory that is configured to store the extracted data in a hierarchical manner, the extracted data being stored in the memory according to whether the extracted data is segment data, transaction set data, functional group data, or attribute data[[,]];:

wherein the data extractor is configured to extract at least one functional group from the EDI document ~~from the memory~~ based on a hierarchical relationship between the ~~segment~~ segments extracted from the EDI document and other of the extracted data of the EDI document stored in the memory; and

wherein the data extractor is configured to extract at least one transaction set from the EDI document that is a part of the at least one functional group, based on a linkage in the memory of the at least one transaction set to the at least one functional group[[,]];:

wherein each of the extracted data stored in the memory is assigned an attribute that is also stored in the memory and that is linked to each of the extracted data[[,]]; and

wherein the at least one functional group and the at least one transaction set extracted from the EDI document are stored in the memory with a common attribute.

7. – 10. (Canceled).

11. (Currently Amended) A computer readable data storage medium for an EDI system having program code recorded thereon that is executable by a computer to perform the following steps:

extracting segments, transaction sets, functional groups, and attributes from an EDI document, as extracted data;

storing the extracted data in a memory in a hierarchical manner according to whether the extracted data is segment data, transaction set data, functional group data, or attribute data[[,]];:

~~extracting wherein~~ at least one functional group is extracted from the EDI document ~~from the memory~~ based on a hierarchical relationship between the ~~segment~~ segments extracted from the EDI document and other of the extracted data of the EDI document stored in the memory; ~~and~~

~~extracting wherein~~ at least one transaction set is extracted from the EDI document that is a part of the at least one functional group, based on a linkage in the memory of the at least one transaction set to the at least one functional group [[,]];

~~wherein assigning an attribute to~~ each of the extracted data stored in the ~~memory is assigned an attribute that is also stored; and~~

storing, in the memory, the assigned attributes and linking the assigned attributes ~~and that is linked to each of the extracted data, and;~~

wherein the at least one functional group and the at least one transaction set extracted from the EDI document are stored in the memory with a common attribute.

12. – 15. (Canceled).

16. (Previously Presented) The method according to claim 1, further comprising:

providing a graphical user interface to enable a user to select at least one attribute to be retrieved from the memory in order to create an EDI document, and to enable the user to select a particular document shell for which the data retrieved from the memory is to be inputted;

extracting data from the memory based on the at least one attribute selected by the user; and

providing the extracted data into the particular document shell selected by the user, to provide the EDI document for the user on the graphical user interface to allow for further editing and updating of the EDI document by the user.

17. (Previously Presented) The method according to claim 1, wherein the storing step comprises:

storing the EDI document in the memory as a document object having one or more attributes;

storing any segments extracted from the EDI document as document segments in the memory each having one or more attributes;

storing any transaction sets extracted from the EDI document as transaction set segments in the memory each having one or more attributes; and

storing any functional groups extracted from the EDI document as functional group segments in the memory each having one or more attributes.

18. (Currently Amended) The system according to claim 6, further comprising:

a graphical user interface configured to enable a user to select at least one attribute to be retrieved from the memory in order to create an EDI document, and to enable the user to select a particular document shell for which the data retrieved from the memory is to be inputted[[,]]; and

wherein the data extractor extracts data from the memory based on the at least one attribute selected by the user[[,]]; and

wherein the data extractor provides the extracted data into the particular document shell selected by the user, to provide the EDI document for the user on the graphical user interface to allow for further editing and updating of the EDI document by the user.

19. (Previously Presented) The system according to claim 6, wherein the memory comprises:

a first hierarchical storing block for storing the EDI document as a document object having one or more attributes;

a second hierarchical storing block for storing any segments extracted from the EDI document as document segments each having one or more attributes;

a third hierarchical storing block for storing any transaction sets extracted from the EDI document as transaction set segments each having one or more attributes; and

a fourth hierarchical storing block for storing any functional groups extracted from the EDI document as functional group segments each having one or more attributes.

20. (Previously Presented) The computer readable data storage medium having program code recorded thereon according to claim 11, further comprising:

providing a graphical user interface to enable a user to select at least one attribute to be retrieved from the memory in order to create an EDI document, and to enable the user to select a particular document shell for which the data retrieved from the memory is to be inputted;

extracting data from the memory based on the at least one attribute selected by the user;  
and

providing the extracted data into the particular document shell selected by the user, to provide the EDI document for the user on the graphical user interface to allow for further editing and updating of the EDI document by the user.

21. (Previously Presented) The computer readable data storage medium having program code recorded thereon according to claim 11, wherein the storing comprises:

storing the EDI document in the memory as a document object having one or more attributes;

storing any segments extracted from the EDI document as document segments in the memory each having one or more attributes;

storing any transaction sets extracted from the EDI document as transaction set segments in the memory each having one or more attributes; and

storing any functional groups extracted from the EDI document as functional group segments in the memory each having one or more attributes.

22. (New) The method according to claim 16, further comprising:  
opening up, by the user, a computer application for creating a new document;  
selecting, by the user, the particular document shell from a plurality of different document shells to be used to create the new document; and

retrieving, by the computer application querying the memory, pertinent data of the EDI document stored in the memory in order to populate the particular document shell.